Advanced Topics JS Boot Camp

Axle Barr

Multiple ifs

```
let age = 0;
age = prompt("Enter your age in years: ");
age = parseInt(age);
if (age <= 24)
    printOut = "You are Gen-Z";
else if (age <= 40)
    printOut = "You are Gen-Y";
else if (age <= 56)
    printOut = "You are Gen-X";
else
    printOut = "You are Baby Boomer";
```

PLEDGE

For a pledge of $10

You get a t-shirt

For a pledge of $40

You get a gym bag with the product logo

For a pledge of $100

You get a discount of 40% when product is launched

For a pledge of $200

You get the product at cost price

PLEDGE

$ = how much money do I have to pledge

For a pledge of $10

You get a t-shirt

For a pledge of $40

You get a gym bag with the product logo

For a pledge of $100

You get a discount of 40% when product is launched

For a pledge of $200

You get the product at cost price

PLEDGE

```
$ = how much money do I have to pledge
switch( $ )
For a pledge of $10
        You get a t-shirt
For a pledge of $40
        You get a gym bag with the product logo
For a pledge of $100
        You get a discount of 40% when product is launched
For a pledge of $200
        You get the product at cost price
```

PLEDGE

```
$ = how much money do I have to pledge
switch( $ ) {
For a pledge of $10
        You get a t-shirt
For a pledge of $40
        You get a gym bag with the product logo
For a pledge of $100
        You get a discount of 40% when product is launched
For a pledge of $200
        You get the product at cost price
}
```

PLEDGE

```
$ = how much money do I have to pledge
switch( $ ) {
    case $10:
            You get a t-shirt
    case $40
            You get a gym bag with the product logo
    case $100
            You get a discount of 40% when product is launched
    case $200
            You get the product at cost price
}
```

JavaScript Switch Statement

```
switch(value or expression) {
 case x:
  // perform actions pertaining to x
 case y:
  // perform actions pertaining to y
}
```

Pass in an expression and the Switch will evaluate it

JavaScript Switch Statement

```
switch(value or expression) {
  case x:
   // perform actions pertaining to x
  case y:
   // perform actions pertaining to y
  case ….
   // …
}
```

Pass in an expression and the Switch will evaluate it

JavaScript Switch Statement

```
switch(value or expression) {
 case x:
  // perform actions pertaining to x
  break;
 case y:
  // perform actions pertaining to y
  break;
}
```

Pass in an expression and the Switch will evaluate it

JavaScript Switch Statement

```
switch(value or expression) {
  case x:
   // perform actions pertaining to x
   break;
  case y:
   // perform actions pertaining to y
   break;
}
 // rest of the program …
```

Pass in an expression and the Switch will evaluate it

JavaScript Switch Statement

```
switch(age) {
 case 18:
  // perform actions pertaining to 18
  break;
 case 21:
  // perform actions pertaining to 21
  break;
 default:
  // perform actions if expression is not x or y
}
```

Pass in an expression and the Switch will evaluate it

Days of the Week

```
let dayOfWeek = "";
dayOfWeek = prompt("Enter day of the week: ");
switch(dayOfWeek){
        case "Monday":
                printOut = "Cool, its the first day of the week";
}
```

Simple example

Days of the Week

```
let dayOfWeek = "";
dayOfWeek = prompt("Enter day of the week: ");
switch(dayOfWeek){
        case "Monday":
                printOut = "Cool, its the first day of the week";
                break;
}
```

Simple example

Days of the Week

```
let dayOfWeek = "";

dayOfWeek = prompt("Enter day of the week: ");

switch(dayOfWeek){

        case "Monday":

                printOut = "Cool, its the first day of the week";

                break;

        case “Tuesday":

                printOut = "Well its only the second day of the week";

                break;

}
```

Simple example

Days of the Week

```
switch(dayOfWeek){
        case "Monday":
                printOut = "Cool, its the first day of the week";
                break;
        case "Tuesday":
                printOut = "Well its only the second day of the week";
                break;
        case "Wednesday":
                printOut = "Whew! We made it to the middle of the week";
                break;
        case "Thursday":
                printOut = "One more day to Friday";
                break;
        case "Friday":
                printOut = "Finally! It's the end of the week";
                break;
        default:
                printOut = "Its the weekend!!!";

}
```

Simple example

Errors/Bugs

Two types of errors, logic and syntax

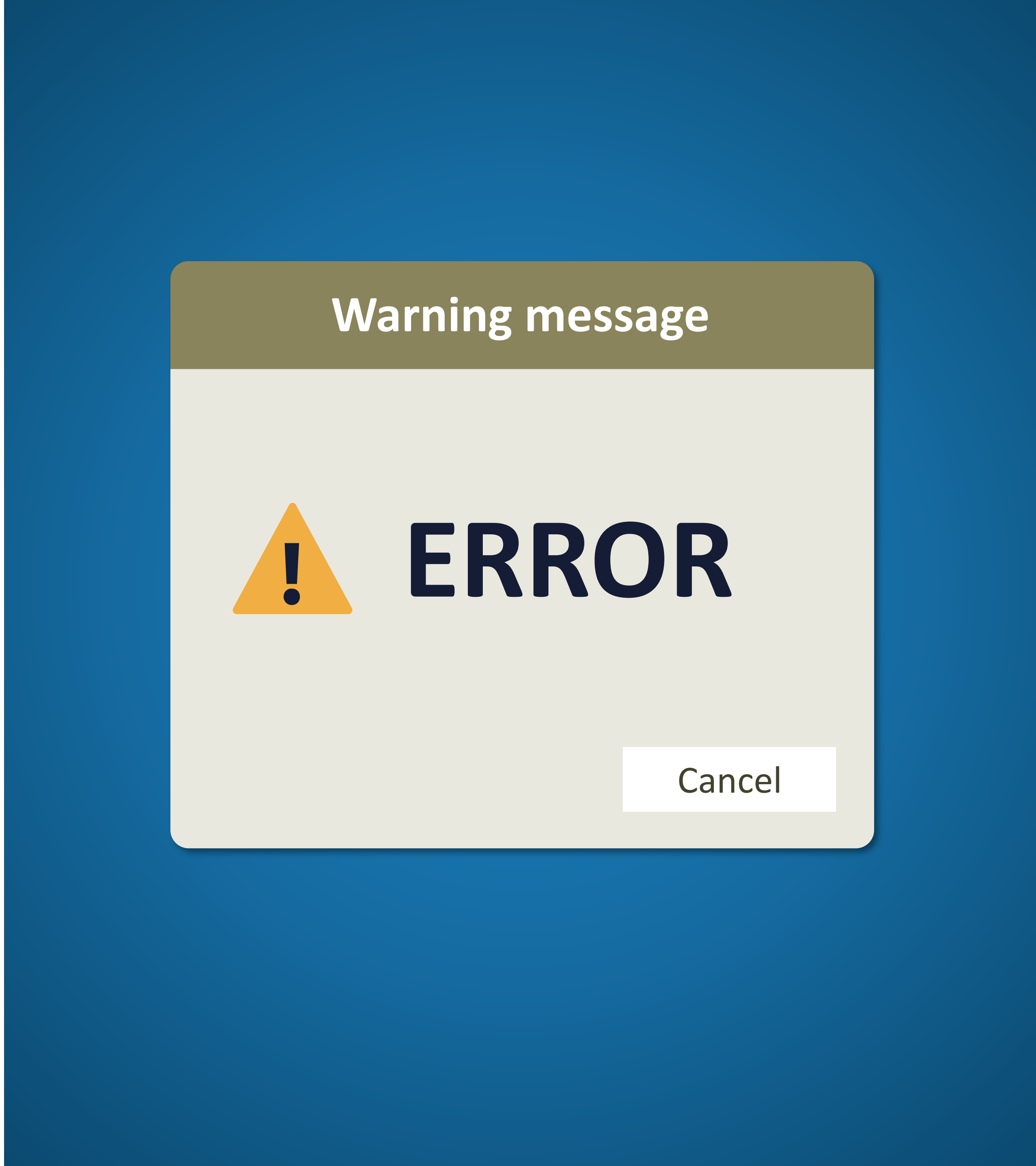
Syntax errors occur in the language itself

Logic errors are made by humans

Most syntactical errors are caught by the machine

Debugging is a technique designed to find errors

An Integrated Development Environment(IDE) assist the programmer in identifying and solving syntactical errors



Identify the syntax error

```
dayOfWeek = prompt("Enter day of the week: ");
switch(dayOfWeek){
        case "Monday":
                printOut = "Cool, its the first day of the week";
                break;
        case "Tuesday":
                printOut = "Well its only the second day of the week";
                break;
        case "Wednesday":
                printOut = "Whew! W [illegible] e middle of the week";
                break;
        case "Thursday":
                printOut = "One more day to Friday";
                break
        case "Friday":
                printOut = "Finally! It's the end of the week";
                break;
        default:
                printOut = "Its the weekend!!!";

}
```

Missing semi colon (;)

SYNTACTICAL ERRORS

Identify the logic error

```
dayOfWeek = prompt("Enter day of the week: ");
switch(dayOfWeek){
        case "Monday":
                printOut = "Cool, its the first day of the week";
                break;
        case "Tuesday":
                printOut = "Well its only the second day of the week";
                break;
        case "Wednesday":
                printOut = "One more day to Friday";
                break;
        case "Thursday":
                printOut = "Whew! We made it to the middle of the week";
                break;
        case "Friday":
                printOut = "Finally! It's the end of the week";
                break;
        default:
                printOut = "Its the weekend!!!";

}
```

LOGICAL ERRORS

LOGICAL ERROR

Identify the logic error

```
let total = 0.0, averageSale = 0.0;
const cart = [620, 450, 800, 190, 140, 300];
for (let eachSale in cart) {
  total += cart[eachSale];
}
averageSale = total / 5;
printOut = “Average Sales: “ + averageSale;
```

LOGICAL ERROR

Identify the logic error

```
let total = 0.0, averageSale = 0.0;
const cart = [620, 450, 800, 190, 140, 300];
for (let eachSale in cart) {
  total += cart[eachSale];
}
averageSale = total / (cart.length);
printOut = “Average Sales: “ + averageSale;
```

LOGICAL ERROR

Identify the logic error

```
let total = 0.0, averageSale = 0.0;
const cart = [620, 450, 800, 190, 140, 300];
for (let eachSale in cart) {
  total += cart[eachSale];
}
averageSale = total / (cart.length);
printOut = “Average Sales: “ + Math.round(averageSale);
```

LOGICAL ERROR

Identify the logic error

```
let total = 0.0, averageSale = 0.0;
const cart = [620, 450, 800, 190, 140, 300];
for (let eachSale in cart) {
  total += cart[eachSale];
}
averageSale = total / (cart.length);
printOut = “Average Sales: “ averageSaleaverageSale.toFixed(2)
```

Loading (Populating) Arrays

```
const colors = [];
colors[0] = "blue";
colors[1] = "red";
colors[2] = "green";
```

Advanced Arrays

Loading (Populating) Arrays

```
const colors = [ ];
let moreColors = true;
while (moreColors == true) {
  let newColor = prompt("Enter color: ");
  colors[ ] = newColor;
}
```

Advanced Arrays

Loading (Populating) Arrays

```
const colors = [ ];
let moreColors = true, count = 0;
while (moreColors == true) {
  let newColor = prompt("Enter color: ");
  colors[count ] = newColor;
  count++;
}
```

Advanced Arrays

Loading (Populating) Arrays

```
const colors = [ ];
let moreColors = true, count = 0;
while (moreColors == true) {
  let newColor = prompt("Enter color: ");
  if(newColor != null){
    colors[count ] = newColor;
    count++;
  } else {
     break;
  }
}
```

Advanced Arrays

String Functions

```
let name = "Skillsoft";

printOut = name.length;
```

String Functions

```
let name = "Skillsoft";

let part = name.substring(5);

printOut = part;
```

String Functions

```
let name = "Skillsoft";

let part1 = name.substring(0,5);

let part2 = name.substring(5);

printOut = part2 + " " + part1
```

```
let name = "Skillsoft";
let part1 = name.charAt(0);
printOut = part1;
```

Advanced Array Functions

```
let name = "Skillsoft";
let part1 = name.charAt(0).toLowerCase();
printOut = part1;
```

Advanced Array Functions

```
let name = "Skillsoft";

let part1 = name.substring(0,5);

let part2 = name.substring(5);

printOut = part2.charAt(0).toUpperCase() + part2.substring(1,5)+ " " + part1;
```

Advanced Array Functions

Advanced Array Functions

```
let oldSentence = "Prepare the workforce of today";
let newSentence = oldSentence.replace("today", "tomorrow!");
printOut = newSentence;
```